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BEFORE THE BOARD OF PATENT APPEALS
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Appellant(s): Roger F. Baines

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James A. Finder
For Appellant

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BOARD OF PATENT APPEALS
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EXAMINER'S ANSWER

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This is in response to appellant's brief on appeal filed January 24, 1994.

(1) *Status of claims.*

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 5-7 and 9-42.

Claims 6, 7, 15, 20, 23 and 42 are amended subsequent to the final rejection.

(2) *Status of Amendments After Final.*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment(s) after final rejection filed on November 19, 1993 been entered.

(3) *Summary of invention.*

The summary of invention contained in the brief is correct.

(4) *Issues.*

The appellant's statement of the issues in the brief is correct.

(5) *Grouping of claims.*

The rejection of claims 5-7 and 9-42 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together. See 37 C.F.R. § 1.192(c)(5).

(6) *Claims appealed.*

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A substantially correct copy of appealed claims 5-7 and 9-42 appears on pages 16-22 of the Appendix to the appellant's brief. The minor errors are as follows: in claim 7, line 5, "a DC motor" should have been --- the DC motor---. Note "a DC motor" in claim 7, line 2. In claim 15, lines 9 and 10, "a single one" should have been --- the single one---. Note "a single one" in claim 7, line 11. In claim 15, line 10, "a same time" should have been -- the same time---. Note claim 7, line 11.

(7) Prior Art of record.

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

4,728,835	Baines	03/1988
3,671,791	Muller et al.	06/1972
4,086,510	Watanabe	04/1978
3,619,677	Hargreaves	11/1971

No new prior art has been applied in this examiner's answer.

(9) Grounds of rejection.

The following ground(s) of rejection are applicable to the appealed claims.

Claims 7 and 10-42 are rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the

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subject matter which applicant regards as the invention. Recitation "a DC motor" (claim 7) is recited twice and is not clear; recitation "a single one" and "a same time" (claim 15) are not clear because they have been recited in the independent claim 7; recitations "said first and second support arms" (claims 10-13), "said third and fourth support arms" (claims 15, 16, 37), "said first support", "said second support" (claims 17, 33), "said first support" (claims 24, 28), "said first and second supports" (claim 42) are without proper antecedent basis. Recitation "a plurality of circumferential segments and the first and second brush bodies being disposed for contacting a single one of said at a time when the assembly is mounted in the motor, the support arms being connected electrically in parallel" (claim 7) is insufficiently supported in the specification.

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as the specification, as originally filed, does not provide support for the invention as is now claimed. Recitation "brushes being mounted on said end cap via said

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supports for contacting the commutator of the motor....brushes being mounted so as to be at substantially common position around the circumference" (claim 19), "brushes are mounted so as to be capable of contacting a common one of said segments simultaneously" (claims 20 and 23), "third resonant frequency", "fourth resonant frequency" and "third and fourth resonant frequencies being different" (claim 22), "third and fourth brushes....contacting a common one of said segments simultaneously" (claim 23) are not supported in the original specification and are considered new matter.

Claims 19-23 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

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Claims 5, 6, 7, 9-14, 17-20, 40-42 are rejected under 35 U.S.C. § 103 as being unpatentable over Baines in view of Muller et al. Baines (Fig. 1) teaches DC motor including a pair of resilient, conductive support arms or holders 18, 19, a brush on each arm, a commutator with circumferential segments so that each brush abuts a respective segment of the commutator, the arms or holders are connected in parallel. Baines does not teach that each arm with the brush is of a different resonance frequency of oscillation. Muller et al. teaches a wiper assembly used for electrical machines (col. 1, line 42). It is noted that the expression "wiper assembly" is a matter of different lexicon or expression used by Muller et al. to define a support arm and brush assembly used in an electrical machine. Further, Muller et al. teaches that the wiper arms or the support arms with brushes, because of their difference in length or size guarantees that the resonance frequencies of the individual arms of wiper will be different (col. 2, lines 36-39). Accordingly, it would have been obvious to one skilled in the art of the time of the invention to modify the lengths or sizes of the brush holders or support arms with brushes of Baines in view of teaching of different lengths or sizes of wipers or support arms with brushes by Muller et al. so that each individual support arm with brush is of a different resonance frequency, because it would provide adequate brush contact without increasing brush pressure and the performance of

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the motor would improve.

Claims 15, 16, 21-23, 34-39 are rejected under 35 U.S.C. § 103 as being unpatentable over Baines in view of Muller et al. as applied to claims 5, 6, 7, 9-14, 17-20, 24-33 above, and further in view of Watanabe or Hargreaves. Watanabe (Fig's 1, 2) teaches four conductive brushes. Hargreaves (Fig. 7) teaches four resilient support means with brushes. It would have been obvious to a person of an ordinary skill in the art of the time of the invention to use the teaching of Watanabe or Hargreaves with the teaching of Baines (as modified by Muller et al.). In particular, one skilled in the art would have been capable to form all four brush support arms of Hargreaves in a manner taught by Muller et al. i.e. different resonance for each arm, because this would have been within the scope of knowledge of one skilled in the art.

(11) *Response to argument.*

Appellant argues that "said first and second support arms" has proper antecedent basis in claim 7, lines 3 and 4. It is noted, however, that the recitation in claim 7, lines 3 and 4 reads "first and second resilient, electrically conductive support arms". Accordingly, "said first and second support arms" as recited in claims 10-13 is without antecedent basis. It is argued that "said third and fourth support arms" (claims 15, 16, 37) is provided with proper antecedent basis and states that

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proper support is provided in lines 2, 3 of claim 15. It is noted that in claim 15, lines 2 and 3 refer to "third and fourth resilient, electrically conductive support arms". Therefore, "said third and fourth support arms" as recited in claims 15, 16, 37 is without antecedent basis. It is noted that "said first support" (claims 24, 28), "said first and second supports" (claim 38) and "said different resonance frequencies" (claim 42) are not provided with proper antecedent basis. Appellant argues that "plurality of circumferential segments.....the support arms being connected electrically in parallel" (claim 7) is supported in the specification. It is noted that the specification does not disclose the above-mentioned recitation.

Appellant argues that "New Matter" rejection of claims is inappropriate because the claims have not been rejected under 35 USC 132. It is pointed out that the rejection of claims 13-23 under 35 USC 112, first paragraph, is proper. See MPEP 706.03(o).

Applicant argues that Muller et al. does not disclose motor. It should be noted that Muller et al. refers to "electrical machines" (col. 1, line 42) which clearly include the motors. Appellant argues that Muller's "arms" are not axially spaced from each other. Note that Watanabe (Fig's 1, 2) teaches such an arrangement. Baines (Fig. 1) clearly shows that the support arms and brushes extend toward a common circumferential region.

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Appellant emphasizes that the support arms of Muller et al. are not spaced axially. One skilled in the art would have been capable of spacing the support arms in any desired manner since, obviously, it would not require undue experimentation and would have been known to one skilled in the art. On page 10, third paragraph, appellant states that claims 7, 15, 17, 19-20, 23 recite that the brushes contact the same circumferential segment or region of the commutator. It appears that all cited references, including Muller et al., disclose and/or show such an arrangement. Appellant further asserts that Muller et al. would not require that first and second brushes have different frequencies. Attention is solicited to Muller et al., col. 2, lines 36-39 wherein it is disclosed that the resonant frequencies of the arms will be different. It is argued that Muller et al. does not provide "adjusting means". It is noted that the arms 15, 16 of Muller et al. are of different lengths thus providing "adjusting means". Appellant argues that the wiper arms Muller et al. do not have brush bodies. Note that Baines (Fig. 1) discloses the arms with the brush bodies.

Despite appellant's statements to the contrary Watenabe and Hargreaves are proper references in that they teach the

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arrangements of four supports/brushes which in combination with Baines (as modified by Muller et al) meets the subject matter of claims 15, 16, 21-23, 34-39, in an obvious sense.

For the above reasons, it is believed that the rejection should be sustained.

Robert Skudy

Respectfully submitted,

Skudy/dc
April 12, 1994